



S/N 09/111,978

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Leonard H. Bieman
Serial No.: 09/111,978
Filed: July 8, 1998
Title: SCANNING PHASE MEASURING METHOD AND SYSTEM FOR AN
OBJECT AT A VISION STATION

Examiner: Hoa Q. Pham
Group Art Unit: 2877
Docket: 139.045USR

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3/9/01
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AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

Commissioner for Patents
Washington, D.C. 20231

Applicant has reviewed the Office Communication mailed January 30, 2001. Please
amend the above-identified patent application as follows.

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IN THE CLAIMS

Please amend the claims as follows: (Status of all claims after Amendment filed
10/30/2000, now with corrected underlining.)

1. [Amended Once] A method for high speed, scanning phase measuring of an object at a
vision station to develop physical information associated with the object, the method comprising
the steps of:

projecting a pattern of imagable electromagnetic radiation with at least one projector;
moving the object relative to the at least one projector at a substantially constant velocity
at the vision station so as to scan the projected pattern of electromagnetic radiation across a
surface of the object to generate an imagable electromagnetic radiation signal;

receiving the imagable electromagnetic radiation signal from the surface of the object
with a detector having a plurality of separate detector elements which are substantially uniformly
spaced;

maintaining the at least one projector and the pattern of imagable electromagnetic
radiation and the detector in a substantially fixed relation to each other;

measuring an amount of radiant energy in the received electromagnetic radiation signal
with the detector wherein each of the detector elements produce an image having a different
phase of the same scanned surface based on the measurement; and

computing phase values and amplitude values for the different phases from the multiple
images.